

GS-5 Certified: Increasing Soil Science Educational Opportunities Online for Undergraduate Students and USDA Employees

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National Program Director**

Challenge

**In FY 2008 USDA Identified
20 Mission Critical Occupations**

- 7. Soil Conservation Specialist (457)**
- 8. Soil Conservation Technician (458)**
- 11. Soil Science Specialist (470)**

Challenge

As of 10/21/07 (51,211 employees)

0457-Soil Conservation Specialist

4% Hispanic

0458-Soil Conservation Technician

2.8% Hispanic

0470-Soil Science Specialist

3.5% Hispanic

Challenge

**While there is a need for soil scientists,
soil science programs and courses
disappearing**

**Replaced with Environmental Science
Programs with less soil science course
hours**

Challenge

Example:

University of California Riverside

No longer degree offered in Soil
Science, but rather Environmental
Science

Challenge

Student graduating with BS in
Environmental Science from UCR
requires an additional 6-12 hours of
soils courses for GS5 470 Series!

Often courses that are offered every
other year.....

Soil Online

<http://academic.rcc.edu/soil/>

Three year project USDA CSREES HSI funded

USDA CSREES Proposal Number: 2008-02162

Five online Soil Science Courses

Riverside City College (2 courses)

UC-Riverside (3 courses)

Soil Online

<http://academic.rcc.edu/soil/>

Cost?

Riverside City College - \$20 per credit unit

UC-Riverside – around \$450 per course

(depends on number enrolled)

Courses

Fall 2009 – Offered through RCC

Bio 14 – Introduction to Soil Science - Lecture

Bio 15 - Introduction to Soil Science - Laboratory

Fall 2010 – Offered through UCR

Introduction to Soil Science

Upper Division Lecture

Fall 2011– Offered through UCR

Soil Physics

Upper Division Lecture

Soil Online

Faculty

Dr. Ron Reuter – Oregon State University

Dr. Jamie Whiteford – Ventura College

Dr. Sharon Walker – UC-Riverside

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Soil Online

Dr. Ron Reuter

Proven success at OSU online degree programs in Natural Resources, General Agriculture, and Environmental Science

Reuter, R.J. 2007. Introductory soils online - an effective way to get online students in the field. J. Nat. Resour. Life Sci. Educ. 36:139-146.



Soil Online

Dr. Jamie Whiteford

RCC Lower Division Course

Bio 14 – Introduction to Soil Science
Lecture (3 semester hours)

An introduction to physical properties and classification of soils, physical and chemical properties of soil that governs soil reactions and interactions, nutrient regeneration, and management principles in relation to air, water, nutrients and organic matter.



Soil Online

Dr. Sharon Walker

UC- Riverside

Fall 2011 Soil Physics

Topics include physical properties of soils and methods of evaluation.

Emphasis is on movement of water, heat, gasses, and chemicals through soil. This course will be offered through UCR.



Online Courses

All online students required to shadow USDA NRCS, FS, or ARS employee for one day.

For Students

13 outstanding students who complete an online course will be offered a 1-week paid internship (\$1000 stipend) with a USDA agency to provide them an experiential learning opportunity and formal mentoring.

Soil Online

<http://academic.rcc.edu/soil/>

Please visit the website and register
for updates and announcements and
registration details

If you would like to offer time for
students or would like interns
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Co-PI

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[Riverside Graphics Lab](#)

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Thank You!

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